

```

/*
    GOPIKRISHNA V
    52
    S3 CSE A
    DOUBLY LINKED LIST
*/
import java.util.*;
class DoublyLinkedList
{
    class Node
    {
        int data;
        Node prev;
        Node next;
        public Node(int data)
        {
            this.data = data;
        }
    }
    Node head,tail = null;
    public void insert(int data)
    {
        Node temp = new Node(data);
        if(head == null)
        {
            head = tail = temp;
            head.prev = null;
            tail.next = null;
        }
        else
        {
            tail.next = temp;
            temp.prev = tail;
            tail = temp;
            tail.next = null;
        }
        System.out.print(data+" >> INSERTED\n");
    }
    public void delete()
    {
        if(head == null)
        {
            System.out.print("List is empty");
        }
        else
        {
            int data = head.data;
            head = head.next;
        }
    }
}

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        head.prev = null;
        System.out.print(data+" >> DELETED\n");
    }
}
public void printlist()
{
    Node current = head;
    if(head == null)
    {
        System.out.println("List is empty");
        return;
    }
    else
    {
        System.out.print("List = [");
        while(current != null)
        {
            System.out.print(current.data + ",");
            current = current.next;
        }
        System.out.println("\b]");
    }
}
}
public class pgm11
{
    public static void main(String[] args)
    {
        DoublyLinkedList dll = new DoublyLinkedList();
        int ch = 0;
        while(ch != 4)
        {
            System.out.print("\n### MENU ###\n");
            System.out.print("1.Insert at End\n");
            System.out.print("2.Delete from Front\n");
            System.out.print("3.Display Linked List\n");
            System.out.print("4.Exit\n");
            System.out.print("Enter your choice = ");
            Scanner s = new Scanner(System.in);
            ch = s.nextInt();
            switch(ch)
            {
                case 1:
                {
                    System.out.print("Enter the element = ");
                    int data = s.nextInt();
                    dll.insert(data);
                    break;
                }
            }
        }
    }
}

```

### OUTPUT

```
### MENU ###
1.Insert at End
2.Delete from Front
3.Display Linked List
4.Exit
Enter your choice = 3
List = [1,2,3]

### MENU ###
1.Insert at End
2.Delete from Front
3.Display Linked List
4.Exit
Enter your choice = 2
1 >> DELETED

### MENU ###
1.Insert at End
2.Delete from Front
3.Display Linked List
4.Exit
Enter your choice = 3
List = [2,3]

### MENU ###
1.Insert at End
2.Delete from Front
3.Display Linked List
4.Exit
Enter your choice = 4
administrator@administrator-hcl-desktop:~/gopikrishna/pgm11$
```